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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,171	03/27/2002	Rainer Blum	50762	9728
26474	7590	10/03/2003	EXAMINER	
KEIL & WEINKAUF			MCCLENDON, SANZA L.	
1350 CONNECTICUT AVENUE, N.W.			ART UNIT	
WASHINGTON, DC 20036			PAPER NUMBER	

1711

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/089,171

Applicant(s)

BLUM ET AL.

Examiner

Sanza L McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8,9,12-14,17,18,21-25,27 and 28 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 10-11, 15, 19-20, and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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DETAILED ACTION

*Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-2, 8, 2-12-14, 16, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The term "parent structure" in claims 1-2, and 12-14 is a relative term, which renders the claim indefinite. The term "parent structure" is not defined by the claim. It is unclear what type/kind of backbone and/or polymer the parent structure is deemed to be by applicant.

4. Claims 16 and 23 provides for the use of a solid or of a coating material comprising said solid, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 16 and 23 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

5. Regarding claim 8, it is unclear if the functional group (e) is one of the functional groups in (a) or a separate functional group contained in the solid of claim 1. It is unclear if functional group (f) is one of the functional groups of

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(a) or if it is a functional group within the solid or is a functional group provided by another materially different compound added to the solid of claim 1. Clarification is requested.

*Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3, 5-6, 9, 12-13, 17-18, 21-25, and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Morgan (US 4,017,371).

Morgan et al teaches solid radiation curable polyene compositions comprising liquid polythiols. Said solid polyene is a styrene-allyl alcohol copolymer modified to have at least two reactive carbon-carbon unsaturated bonds. Said modification comprises reacting said polyene with an ene-isocyanate or ene-acid. When reacted with an ene-isocyanate said polyene would have urethane linkages comprising ethylenic unsaturation. In addition, Morgan et al teaches using other materially different ene-isocyanates to produce other materially different unsaturated groups bound via urethane linkages—see column 4, lines 49-54. This appears to anticipate claims 1, 3, 5-6, and 9, wherein it is either inherently amorphous or crystalline or semi-crystalline. Said polyene have molecular weights in the range from 332 to 20,000, preferably from 1200 to 10,000, wherein at least the lower limits taught by Morgan anticipate claim 12. The styrene comprises ethylenically unsaturated bonds and therefore anticipates claim 13. Morgan teaches said polyene-polythiol compositions are useful in making printed circuit boards, photoresist, printing plates, and the

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like—column 12. The polythiol component added in the composition taught by Morgan appears to anticipate claim 18. In addition, the polyene-polythiol composition can comprise other components, such as those listed in column 10, lines 45-65. This appears to anticipate claim 21. Said polyene-polythiol reaction products are coated onto substrates by dissolving in a solvent and adding photoinitiators and other components as found in the examples and coating, evaporating the solvent using heat, and then curing using actinic radiation. This appears to anticipate claim 24. In addition, Morgan teaches post-baking printed circuit boards coated and developed with the composition; wherein this appears to anticipates claims 25 and 27-28.

*Allowable Subject Matter*

8. Claims 4, 7, 10-11, 15, 19-20, and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art fail to teach HALs or photoinitiators/photo-co-initiators chemically bonded to solid containing on average per molecule at least two groups having at least on bond activatable by actinic radiation, wherein the at least two groups are structurally different from each other. Or a solid containing on average per molecule at least two groups having at least on bond activatable by actinic radiation, wherein the at least two groups are structurally different from each other having a melting range or point in the range from 40 to 130 °C or a melt viscosity at 130 °C of from 50 to 20000 MPa. Nor heating said composition using near infrared light in combination with actinic radiation curing.

*Conclusion*

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L McClendon whose telephone number is (703) 305-0505. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

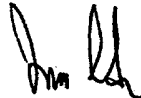
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0657.

Sanza L McClendon

Examiner

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James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700

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